

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OKLAHOMA

STATE OF OKLAHOMA, et al.,)	
)	
Plaintiffs,)	
)	
v.)	Case No.: 05-cv-329-GKF-SH
)	
TYSON FOODS, INC, et al.,)	
)	
Defendants.)	

**PLAINTIFFS' RESPONSE TO ORDER OF THE COURT SUPPLEMENTING
EXPERT GREG SCOTT DISCLOSURES**

The State of Oklahoma ("the State" respectfully submits the following:

"Annually, only about 20 – 30% of the P applied to agricultural land is exported directly out of the watershed (in runoff or removal in grain and animal produce). The remaining 70-80% of applied P enters stores in soil, river sediments, groundwater, wetlands, riparian floodplains, lakes, and estuaries (Jarvie et al. 2013)." Figure 1 from Jarvie et al. (2013) also summarizes work presented by Sharpley et which summarizes the residencies and recycling time of phosphorus in various

ortions of the watershed lasting from months to millennia.

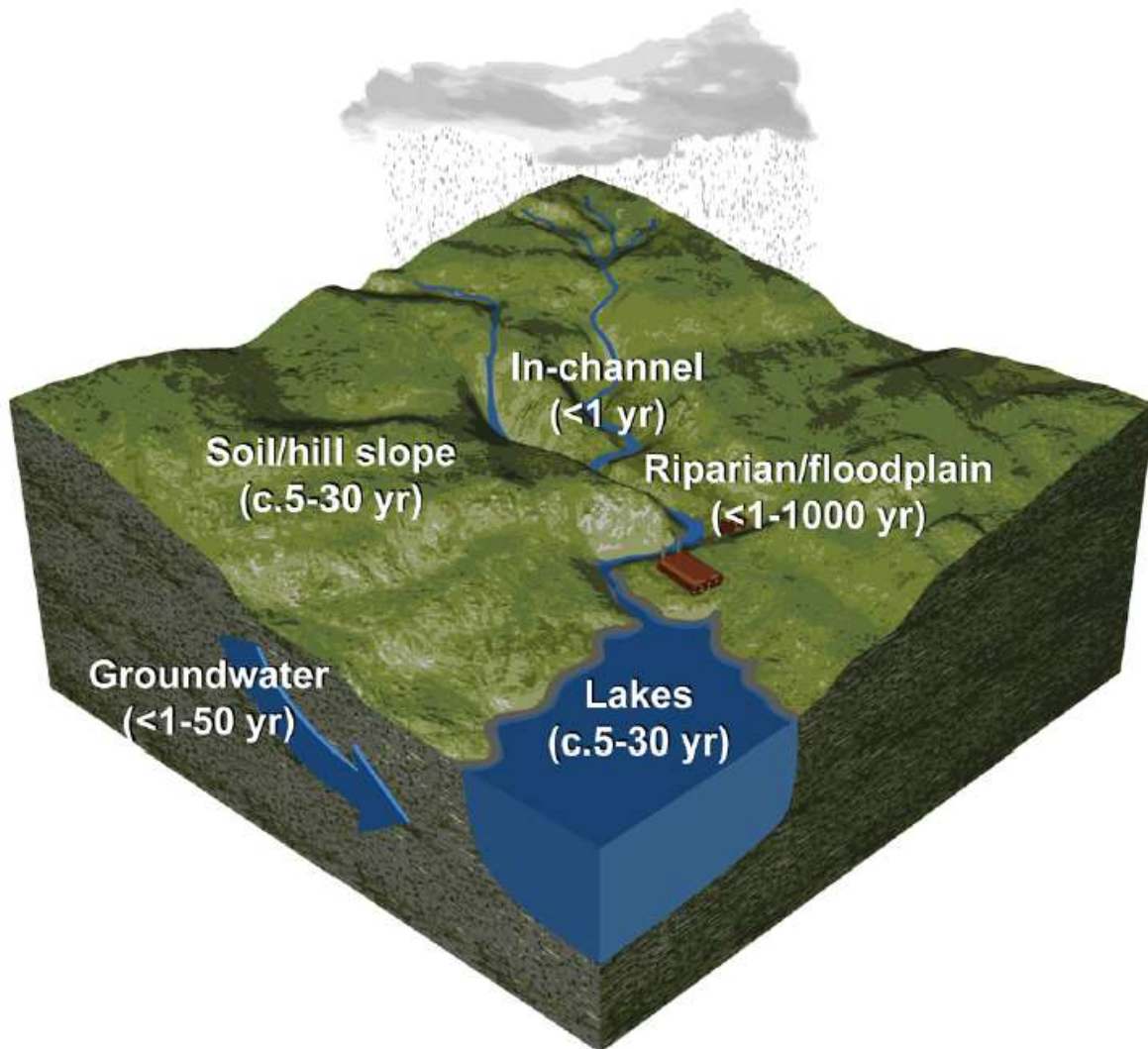


Figure 1. Typical time scales for phosphorus (P) retention and recycling in watershed and waterbody legacy P stores. These result in a continued chronic release of “legacy P”, impairing downstream water quality over time scales of years to decades, or even centuries (from data provided by Sharpley et al, 2013).

Sharpley et al. (2013) cited research that stated reducing high soil phosphorus to levels that have a lower risk to enrich runoff with phosphorus may take decades.

Finally, Kleinman et. al. (2011) found that while halting further phosphorus addition to already phosphorus rich soils might decrease the rate at which dissolved phosphorus leached from those soils, the already accumulated phosphorus may persist for decades.

Literature cited:

Jarvie, H., A. Sharpley, B. Spears, A. Buda, L. May and P. Kleinman. 2013. Water quality remediation faces unprecedented challenges from “legacy phosphorus”. J. Environmental Science and Technology. Vol. 47: 8997-8998.

Kleinman, P., A. Sharpley, A. Buda, R. McDowell, and A. Allen. 2011. Soil controls of phosphorus in runoff: management barriers and opportunities. Canadian J. Soil Science. Vol: 91: 329-338.

Sharpley, A. H. Jarvie, A. Buda, L. May, and P. Kleinman. 2013. Phosphorus legacy: overcoming the effects of past management practices to mitigate future water quality impairment. J. Environmental Quality. Vol. 42: 1308-1326.

Respectfully submitted,

**RIGGS, ABNEY, NEAL TURPEN,
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CERTIFICATE OF SERVICE

I hereby certify that on this 2nd day of December 2024, I electronically transmitted the foregoing document to the Clerk of Court using ECF system for filing and transmittal of a Notice of Electronic Filing to the ECF registrants with entries of appearance³ filed of record.

/s/ M. David Riggs